

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

1(currently amended). An automated method of optimising crystallisation conditions for macromolecules comprising the step of forming a crystallisation trial, the trial comprising a sample comprising:

~~(i)~~ (a) a gel forming component; and

~~(ii)~~ (b) ~~the~~ a macromolecule to be crystallised, wherein at least one component of the trial is dispensed using an automatic liquid dispensing system.

2(currently amended). A method according to ~~Claim~~ claim 1 wherein a layer of oil is present over the sample.

3(currently amended). A method according to ~~Claim~~ claim 2 wherein the sample and oil are dispensed from different tips of the automatic liquid dispensing system.

4(currently amended). A method according to ~~Claims~~ claims 2 or 3 wherein the oil is dispensed first and the sample is dispensed under the oil.

5(currently amended). A method according to any one of ~~Claims~~ claims 1 to 4 ~~3~~ wherein ~~the~~ a surface onto which the gel-forming component or sample is dispensed is a greased surface.

6(currently amended). A method according to ~~Claim~~ claim 5 wherein the grease is a high-vacuum silicone grease.

7(currently amended). A method according to ~~Claim~~ claim 1 further comprising the steps of:

~~(i)~~ (c) incubating the sample as a drop in the presence of a first reservoir with a composition having a higher solute concentration than that of the sample; and

~~(ii)~~ (d) transferring the drop into the presence of a second reservoir with a composition having a lower solute concentration than the first reservoir by means of an automatic robot.

8(currently amended). The method according to ~~Claim~~ claim 7 wherein the first reservoir composition is covered with a layer of oil.

9(currently amended). A method according to ~~Claim~~ claim 2 or 8 wherein the oil layer permits diffusion from the sample.

10(currently amended). The method according to ~~any one of either one of Claims claims 1 to 9 or 7~~ wherein the gel-forming component is or comprises a material selected from the group consisting of agarose or tetramethyl ortho silane (TMOS).

11(currently amended). The method of ~~Claim~~ claim 10 wherein the gel-forming component is or comprises TMOS and is at a final concentration of 0.2%.

12(currently amended). The method of ~~any~~ either one of ~~Claims claims 1 to 11 or 7~~ wherein the volume of sample dispensed

is less than 5 μ l.

13(currently amended). The method of ~~Claim~~ claim 12 wherein the volume of sample is between 1.5 μ l and 2 μ l.

14(currently amended). The method of ~~any~~ either one of ~~Claims~~ claims ~~1 to 13~~ 2 or 8 wherein the oil layer includes paraffin.

15(currently amended). The method of ~~any~~ either one of ~~Claims~~ claims ~~1 to 14~~ 2 or 8 wherein the oil layer is a mixture of oils.

16(currently amended). The method of ~~Claim~~ claim 15 wherein the oil layer comprises silicone.

17(currently amended). The method of ~~any~~ either one of ~~Claims~~ claims ~~1 to 15~~ 2 or 8 wherein the oil layer consists of paraffin.

18(currently amended). The method of ~~any~~ either one of ~~Claims~~ claims ~~1 to 17~~ 1 or 7 wherein the sample is dispensed into wells of a 1536-well microassay plate.

19(currently amended). A method according to either one of ~~Claim~~ claims ~~1 to 18~~ 2 or 8 wherein the oil layer over the sample permits vapour diffusion between the sample and the environment due to the thinness of the layer.

20(currently amended). ~~Use of~~ An automated method of optimizing crystallization conditions for macromolecules comprising the step of using an automated liquid dispensing

system capable of dispensing volumes of liquid between 0.1µl to 5µl for dispensing a sample of gel-forming component and a macromolecule to be crystallized.

21(canceled).

22(currently amended). Use A method according to ~~Claim~~ claim 20 ~~or 21~~ wherein the optimization includes a method according to ~~any~~ either one of ~~Claims~~ claims ~~1 to 19~~ 1 or 7.

23(currently amended). Use A method according to ~~any one~~ of Claims claim 20 ~~to 22~~ wherein the gel-forming component is 0.2% TMOS.

24-31(cancelled).

32(currently amended). Use A method according to ~~Claim~~ claim ~~31~~ 20 wherein the automated liquid dispensing system is IMPAX or Oryx 6.

33(original). A kit of parts comprising an automated liquid dispensing system and a gel-forming component.

34(currently amended). A kit according to ~~Claim~~ claim 33 wherein the gel-forming component is or comprises TMOS.

35(currently amended). A kit according to ~~Claim~~ claim 33 or 34 further comprising a low density oil.

36(currently amended). A kit of parts according to claim 33 comprising low density oil and grease.

37(currently amended). A kit according to ~~Claim~~ claim 36 wherein the grease is a high-vacuum silicon grease.

38 (currently amended). A kit according to ~~Claim~~ claim 36 or 37 wherein the grease is provided on a multi-well plate.

39 (currently amended). A kit according to ~~any one of Claims~~ claim 35 ~~to 38~~ wherein the oil is paraffin.

40 (currently amended). A method, ~~use or kit~~ according to ~~any~~ either one of ~~the previous claims~~ claim 1 or 7 wherein the macromolecule is a biological macromolecule.

41 (currently amended). A method, ~~use or kit~~ according to ~~Claim~~ claim 40 wherein the biological macromolecule is a polypeptide.

42 (new). A method according to either one of claims 1 or 7 including the use of a material selected from the group consisting of one or more oils.

43 (new). A method according to claim 42 wherein the oil includes a material selected from the group consisting of silicone, paraffin and grease including high-vacuum silicone grease.

44 (new). A method according to claim 43 wherein the grease is provided on a multi-well plate.